WHAT IS CLAIMED IS:

1. An image data correction method for correcting nonuniformity of luminance in an image display region which displays an image in accordance with input image data, comprising the steps of:

storing reference correction data, which correspond to a plurality of specific levels among levels available for the input image data, for each of a plurality of predetermined reference coordinates in the image display region;

interpolating the reference correction data according to level to generate first correction data which correspond to the levels available for the input image data, for each of the plurality of reference coordinates, and storing the first correction data in correspondence to the reference coordinates and the levels;

selecting, from the stored first correction data, data which correspond to a plurality of reference coordinates surrounding the coordinates of the input image data in the image display region and which correspond to the level of the input image data;

interpolating the selected first correction data according to the coordinates to generate second correction data which correspond to the input image data; and

adding the second correction data to the input image data.

2. An image processing circuit for correcting nonuniformity of luminance in an image display region which displays an image in accordance with input image data, comprising:

first storage means for storing reference correction data which correspond to a plurality of specific levels among levels available for the input image data, for each of a plurality of predetermined reference coordinates in the image display region;

first interpolation means for interpolating the reference correction data according to level to generate first correction data which correspond to the levels available for the input image, for each of the plurality of reference coordinates;

second storage means for storing the first correction data in correspondence to the reference coordinates and the levels;

selecting means for selecting, from the first correction data stored in the second storage means, data which correspond to a plurality of reference

coordinates surrounding the coordinates of the input image data in the image display region and which correspond to the level of the input image data;

second interpolation means for interpolating the first correction data selected by the selecting means according to the coordinates to generate second correction data which correspond to the input image data; and

adding means for adding the second correction data to the input image data.

3. An image processing circuit for correcting nonuniformity of luminance in an image display region which displays an image in accordance with input image data, comprising:

a memory that stores reference correction data which correspond to a plurality of specific levels among levels available for the input image data, for each of a plurality of predetermined reference coordinates in the image display region;

an interpolation processor that interpolates the reference correction data according to the level to generate first correction data which correspond to the levels available for the input image data, for each of the plurality of reference coordinates;

a correction table that stores the first correction data in correspondence to the reference coordinates and the levels;

a selection circuit that selects, from the first correction data stored in the correction table, data which correspond to a plurality of reference coordinates surrounding the coordinates of the input image data in the image display region and which correspond to the level of the input image data;

an arithmetic unit that interpolates the first correction data selected by the selection circuit according to the coordinates to generate second correction data which correspond to the input image data; and

an adder that adds the second correction data to the input image data.

4. The image processing circuit according to Claim 3, wherein:

a plurality of scanning lines extending in the X-direction, a plurality of data lines extending in the Y-direction, and pixels corresponding to intersections of the data lines and the scanning lines are provided in the image display region;

the selection circuit includes:

an X counter that counts a first clock signal used as a time basis for X-direction scanning in the image display region and generating X-coordinate data indicating the X-coordinate of a pixel that corresponds to the input image data in the image display region;

a Y counter that counts a second clock signal used as a time basis for Y-direction scanning in the image display region and generating Y-coordinate data indicating the Y-coordinate of the pixel that corresponds to the input image data in the image display region; and

an address generator that specifies a plurality of reference coordinates surrounding the coordinates of the input image data based on the X-coordinate data and the Y-coordinate data and generating addresses used to read pieces of corresponding correction data from the correction table based on the plurality of specified reference coordinates and the level of the input image data; and

the arithmetic unit performs interpolation processing in accordance with the distance from the coordinates of the input image data which are specified by the X-coordinate data and the Y-coordinate data, to the pieces of correction data read by the address generator.

5. The image processing circuit according to Claim 4, wherein:

the input image data includes data corresponding to each of the RGB colors; the reference correction data includes data corresponding to each of the RGB colors;

the memory, the interpolation processor, the X counter, and the Y counter are shared among the RGB colors; and

the correction table, the arithmetic unit, the address generator, and the adder are provided for each of the RGB colors.

6. The image processing circuit according to Claim 3, wherein:

a plurality of scanning lines extending in the X-direction, a plurality of data lines extending in the Y-direction, and pixels formed of electrodes with a liquid crystal therebetween in correspondence to intersections of the data lines and the scanning lines are provided in the image display region; and

the reference correction data corresponding to the plurality of specific levels include correction data corresponding to first and second levels respectively corresponding to first and second turning points at which a display characteristic curve indicating the transmissivity or reflectivity suddenly changes relative to the

effective value of a voltage applied to the liquid crystal, and to at least one level between the first and second levels.

7. The image processing circuit according to Claim 6, wherein:

the interpolation processor interpolates the reference correction data when generating the first correction data corresponding to each level ranging from the first level to the second level;

the interpolation processor uses the reference correction data that corresponds to the first level when generating the first correction data corresponding to each level below the first level;

the interpolation processor uses the reference correction data that corresponds to the second level when generating the first correction data corresponding to each level exceeding the second level;

the correction table stores correction data for each level ranging from the first level to the second level;

the selection circuit selects, from the correction data stored in the correction table, the correction data that corresponds to the first level when the level of the input image data is below the first level;

the selection circuit selects, from the correction data stored in the correction table, the correction data that corresponds to the level of the input image data when the level of the input image data is within the range of the first level to the second level; and

the selection circuit selects, from the correction data stored in the correction table, the correction data that corresponds to the second level when the level of the input image data exceeds the second level.

8. The image processing circuit according to Claim 7, wherein:

when the level of the input image data is below the first level or exceeds the second level, the image processing circuit further includes:

a coefficient output unit that outputs a coefficient in accordance with the difference between the level of the input image data and one of the first level and the second level; and

a multiplier that multiplies the coefficient output from the coefficient output unit by the correction data corresponding to the first or the second level, which is selected by the selection circuit; and

the arithmetic unit uses the product obtained by the multiplier as the first correction data selected by the selection circuit.

9. The image processing circuit according to Claim 8, wherein:

the coefficient output unit includes:

a look up table that stores coefficients corresponding to at least two points in a region in which the level of the input image data is below the first level or in a region in which the level of the input image data exceeds the second level; and

a coefficient interpolating unit that interpolates the coefficients stored in the look up table and obtaining a coefficient that corresponds to the input image data.

10. The image processing circuit according to Claim 3, wherein:

the input image data includes data corresponding to each of the RGB colors;

the reference correction data includes data corresponding to each of the RGB colors;

the interpolation processor generates the first correction data in correspondence to each of the RGB colors; and

the correction table, the arithmetic unit, and the adder are provided for each of the RGB colors.

11. The image processing circuit according to Claim 10, wherein:

the amount of the reference correction data for G is greater than the amount of the reference correction data for R or for B.

12. The image processing circuit according to Claim 11, wherein:

the reference correction data for R or for B correspond to coordinates extracted from the plurality of reference coordinates corresponding to the reference correction data for G based on specific rules.

13. An electro-optical apparatus, comprising:

an image processing circuit as set forth in Claim 3; and

a drive circuit that displays an image in an image display region based on the image data corrected by the image processing circuit.

14. An electronic apparatus, comprising:

an electro-optical apparatus as set forth in Claim 13.